AVOCATIONAL COMPUTERISTS' PATHFINDER

Produced By
William J. Harmer
97 Ruskin Street
Ottawa, Ont. K1Y 4B3
CANADA

----------Amateur Computer Users' Documentation/Techno-Trends Tracker------#2-1992---
—Dec.31 ,1992 — ©1992 in the public domain, except pages 2,7 — 8 pages —

Well, here it is again: one more issue of this occasional newsletter. This issue will be sort of a special one, devoted to what is happening around us in the way of techno-trends and the computer and electronics developments of our time. It is certainly what will be in the news in North America in the coming months as the leaders of the countries here look for ways to fix the North American economy. May we offer some suggestions? Page 5 takes a look at the danger of quack cures being peddled by certain promoters, for the problems in our educational system. Page 4 looks at how job and hiring trends affect international competitiveness, and comes up with a possibly unpopular conclusion that the countries where industries fire most, so that expertise and research departments are shut down, will simply never recover any lead over countries in Europe and Japan that keep their development going and emerge from the recession with better and more advanced technology than they entered it with. The advances in technology of foreign industries may not be too obvious when few new products are being released and those that are, not finding a big market, both due to the recession slowing the market. We will see at the end of recession, any county that tries to sell the equivalent of biplanes into a jet propelled market will get a rude shock. That lesson applies particularly to computer hardware and computerized industrial and consumer goods but more and more, with software imbedded in hardware, to software development as an industry too.

This year saw a respected computer expert, E. Yourdon, produce a book devoted to the prediction that the software industry in America will be all but gone, replaced by Japanese, other oriental, etc. competitors like Europeans, in the space of ten years, just like VCR manufacture. It may be a little extreme to take it that far, but he certainly sees a decline. On page 2, this theme is taken up and the strengthts and weaknesses of software as developed in North America, are analysed. Will this prediction come to pass? It is hard to dismiss such a detailed analysis as the book covers, especially written by an insider, as being groundless. Perhaps the answer is that the North American industry is likely to lose its pre-eminence, but how far it will slide, will have to be an issue fought by future leaders in the industry and the reforms government can make in education.

When the economic base of such an innovation dependent industry moves technical brilliance may not prove portable enough to follow it. When O/S's moved, we saw clearly how big company alliances backed losers like MSX of Japan, and a whole line of software and hardware laid an egg in the market, (an example in the USA like OS/2v.1) When consumer electronics died as a cash cow in the USA, with it went a whole way of entrepreneur/inventors which is unlikely to be duplicated in big business atuned European and oriental economies. New products will be those big business does best, largely high priced and sold to other big businesses. The competition is leaving the innovative and hobby market alone, and smaller and smaller companies will do less research overall as that area is generally neglected by all. So for the hobby and are an unemployed programmer, we have a suggestion on page 7. What about a new type of database that you can prototype the ideas for, on an old MS DOS or CP/M computer? As someone has remarked, databases used to be closed systems. The next generation should be expected to be able to look for information, not just regurgitate what has been keyed into it specifically. The old databases were modelled on the situation where one company had one big computer in which the database was. Today we have many computers in an organization running many different and not compatible database and other programs that need to exchange info. How to do it? With intelligence and aids programmed into the database, plus, easy on CP/M or MS DOS computers, a screen grabber, as the interface point between incompatible programs. Should the program take a snapshot of a screen (resulting from query of a BBS for example) or a moving picture? What should it look for in grabbing [illegible] Clue words? Relative cursor/screen positions? Hot-key presses? [illegible] processes be savable, like the key presses on a programmable calc[illegible] Innovation by amateurs is not dead! Perhaps the result might b[illegible] if sold as shareware at least.

NOT SOLD ON NEWSSTANDS [illegible] R USER GROUP.

THIS ARTICLE COPYRIGHT © DEC, 1992, WILL J. HARMER, OTTAWA

Yourdon's Controversy— Is North American Software Sloppily Made?

People are saying of the new book on the subject by E. Yourdon (see footnote), that he wants to get on record as saying, "I told you so!", when in five or ten years time, the US computer software industry is dead, killed by superior foreign competition, perhaps from Japan or even Europe. You may, like me, refuse absolutely to believe that a whole, detailed book on how this might happen, step-by-mistep, on the way software is designed in America, delivered late and bug-infested, would be painstakingly compiled just to say, "I told you so!" But if you fear the problems are imbedded too deeply, then you may doubt this wake-up call can be heeded any more than previous muck-raking books coming out of the public forum of America probing its own psyche. Maybe this will be the exception. Maybe this is close enough to a foreign conspiracy view to goad the Pearl Harbour complex ridden to action. It does compile the list of problems of the industry, that having become so profitable recently, is certain to become a target for foreign competitors of the highest priority for any offshore high tech capable countries. You nod in saddening recognition, like those who first heard of the existence of any other sinister plan brewing among those naively welcomed as friends, such as, at various times, anarchists, criminals and spies. The second part of the message is unfortunately that nearly all of the roots of the problem are structural rather than fixable by a mere short-term tactical change in directions, at least in my opinion, As software becomes bigger, more and more people must co-operate to produce it in larger and larger corporate teams. Recent history shows similar American flops when such a finnicky but similar job as VCR manufacture that was finally abandoned in the USA exactly due to the difficulties of doing such management economically. If people capable of applying the best brains and intelligence matured by careful experience are called to such a national effort, 50% will not make the first call of getting a high school/early college education, and the top of the rest will be heading for careers as doctors or lawyers because they want income security and to be employed with dignity instead of having their reputations and career hopes used as playthings by a type of manager with little integrity and lots of neuroses, and nothing much in law or culture to really restrain them. So if the story of American software development in the future is one of unlikely hero beats fantastic odds in getting rich with new programming idea, so loved of the media, it will just be another sign of business as usual, America competing with one hand (or both) tied behind its back by theory of destructive competition that applies in nature only to lone wolves among animals. Perhaps our WASP, individualistic culture simply got suckered by quackery. Call it just shortsightedness if you will, but mostly the problems are structural and only a few tactical. Contrariwise our individualistic start-up ventures do launch pioneering software.

But it is important not to forget what America is doing right, for competitors also make their mistakes. One unique observation of the failings of, say, the Japanese software industry is that it has traditionally (up to perhaps fairly recently), been given low priority, and considered women's work in a society that is less than non-traditional in its policy towards feminism and equal rights for women in the workplace. Real men, at least in Japan, only work on the hardware, not software. This cultural shortsightedness robbed software work of prestige. The resultant lower priority given software production, is one of the handicaps the Japanese must get past, that more modernized Western societies have come to better grips with. Also, more traditional societies are less open to the "bright emigrant" and they do not fit easily into culturally tight organizations. So future vonNeumans head for the USA.

In a local interview on the subject of Yourdon's book, a local expert commented that to do something as sophisticated as modern programming requires a great deal of follow-through, keeping programmers on staff and paying the dues that precede future marketting success for years. A specific example he gave was the five years needed to get a programming shop up to speed on object oriented programming over the traditional procedure oriented programming. Certainly the staff cut-backs and lack of intermediate positions to grow up through will certainly see a recurrence of the type of design and development already characterizing high tech industries in the Ottawa-Kanata techno-area of hiring a lot of 'instant' specialist diploma graduates, getting a lot of sub-standard work out of them until they get up to speed and then laying the majority off until the next boom, or whatever. Certainly in this day and age when ten/twenty years of experience makes a competent technical worker from a 'B' student, limiting a company to that kind of worker and less competent than that, is not a strong way to enter and age of very sophisticated and expertise demanding software dependent technology.

. . . Continued on pg.7 ----→

The Invention of Disk Drives: A Success Story For IBM

If you look at the floppy disk drive of your computer, you probably have to strain your imagination to remember how it was with computers before disk drives were invented. In those days, electronic memory was expensive and most pre-1970 computers relied on cheaper, bulkier forms of memory, even solid magnets (core storage) for RAM and even before magnetic tape drives, punched paper tape and the punched cards the size of an old US dollar bill were tried. Such media needed big buildings for permanent storage of programs and data. Unfortunately also punched paper or cardboard devices were very slow due to their mechanical nature, feelers, wheels and their momentum and size, only capable of a certain speed of being pushed around before they bacame inacurrate or floated between binary 1 and zero, not touching anything. In fact, the main progress of electronic computers has been to save on the size of the physical objects used to represent binary 1 and 0, from the mechanical calculators' one-inch diameter wheels down to tiny bunches of electrons that respond to a push with the speed of light, and for which a push may take only a tiny bit of energy. Making a mechanical computer is possible, but the size of it and energy to push the wheels around even slowly, would make it skyscraper-sized to do even the simplest practical work. When mechanical devices are governed by limits of inertia (momentum)=weight x speed (physicists use the more precisely framed mass and velocity, mv, if you are going to be looking this up in a reference book) then reducing the weight by reducing the size of each part of a computer used to represent a binary bit is obviously the way to go, and the way computer science has gone. The complexity of the logical and math problems (even addition) that computers need be used to solve to be useful, means many binary bits and many, many parts used to physically represent them, too many for mechanical computers to be useful except in a pinch, when nothing else was available. As for using magnetic storage on tape instead of mechanical storage on punched paper tape or punched cards, the same sort of efficiencies could be had by magnetizing a very tiny area on a ferric oxide coating on plastic tape as opposed to making a rather large hole in paper or cardboard.

It seems we take computers so much for granted now that we forget that they are purely physical ways of working out arithmetic and other information and logical problems, much the way ancient civilization's accountants used to, for example divide 121 apple baskets into three by taking 121 beans and splitting them into three equal sized groups, and then a simple count of one group could tell how many apple baskets would be one third (and how many would be left over). This is simply a base of letting small, physical objects represent numbers to be divided, added , subtracted, compared, etc. Computers just use electrons and magnetizable areas on a magnetic tape or disk to physically represent numbers rather than beans, but the principle is the same. So much for bean counters.

Early tape drives for computers of the 1950's and 1960's did put a lot of binary data in a small space, the commonest standard being to use 8 parallel tracks to save on the length of tape needed to store data of a large blocks. But if you look at an old movie of a computer of this time, the reels of tape are always spinning as the computer tries to find chunks of data on different spots on the tape. So the speed problem became critical as computers got faster and needed to look things up on the tape faster. The mechanisms became a speed bottleneck.

An engineer from IBM had a better idea after taking a lunch break at a diner that had a juke box. He reasoned, if so much data was needed to be looked up that could be found only at unpredictable (mathematically speaking, random from the analytical model used to think of the problem) locations on the tape, perhaps a tape was not the best shape of magnetic medium to use. A disk, like a phonograph record would allow one to get to any track on it without nearly as much physcial movement he reasoned, and so the disk drive was born. It was a matter of, as with a long playing phonograph record, moving the arm to the right track, rather than spinning a reel of tape, many feet along the thread of data written on it, that saved physical movement to speed things up. A genius sort of inspiration! Of course, a phonograph record has its track in a spiral form so the music will not be interrupted as it would be if the tracks were all circles, closing in on themselves, but the computer, very interrupt tolerant did not need this and so the computer disks used non-overlapping circles one inside the other as the tracks to store the data magnetically on, as used to this day, and in one single line of binary bits. A bit stream, when seen electronically at the electronic circuits that feed the electro-mechanical part of the disk drive's data handling pictures it.

So IBM put its first disk drive on the market in 1957. It was a hard disk, with a removable stacked disk unit, magnetic coating on aluminum base.disks, and it was about waist high with a plastic cover to keep out dust that would otherwise obscure the tiney magnetic spots where a binary bit was stored on a track on it. And that is how it all started!

Job Market Affects Trends In Computer And Electronics Development

Loss of a job is considered a personal tragedy these days when it is harder to find a decent alternative. But the same people who have stressed that workers are paid too much and so ruining the competitiveness of this or that industry, fail to see that job loss and other factors that affect employees, rather heavily affect the structure of the industries in society at the same time. An enlightened personnel policy affects the future of a company, an industry and a country's competitiveness too. A little example. If jobs become scarce temporarily, the job seekers start to ignore the possiblity of big payoffs in risky fields, even if their natural talents and greatest potential for future wealth lie there. So as one married man said, right after his company massively laid off employees, he started to look for a really secure job right away, and left shortly after. The most able employees are lost this way, if they have a need for job security due to family comitments (while the flakier playboy/girl types of course may not leave). Multiply this effect many times over many jobs in a whole economy, and you see a trend towards safety and security and avoiding risk taking and impatience with hard or exotic fields of expertise mastery in employees as well as entrepreneurs and capital investors. Is it wise to switch to an overconservative attitude towards change and innovation in a world swept by faster appearance of technology profits?

If hundreds of thousands lose their jobs, some will try harder next time, some will try something else and some will leave the occupation, the country or locality or the job market itself, concluding they are not smart enough, good enough, or are discriminated against. In Canada, many of those who are not giving up hope of success since the are very highly skilled or young or both are more likely to leave the country (mainly for the USA), the occupation they have or have trained for. Some cut their lifestyle and do art or writing without a real job. Whether the numbers leaving the country are significant or not, if the specialist in one niche, technical field leaves (like the senior orthopedic surgeon of the main hospital in a province for that treatment) a big gap opens in the structure of the industry involved, out of proportion to the number (1 person). If a whole generation whose predecessors shunned the fields of business and technical work because it lacked prestige and security, since an employees reputation could be ruined, and career crippled by the whim of an obsessed boss, and those elite students turned to law and medicine, leaving industrial development in the hands of the next strata down, what will this generation's best and brightest turn to?

At the same time even what an employer must do to attract the right employees is changing, since it is not only money but the perceived future value of the job that must be added together to figure the price of bidding for labour to fill it. As people change their attitudes as jobs become scarce, a job may require more or less money than it did before to attract the same worker and different conditions too. For example the telephone company redecorated an office completely from grungy institutional to pastel, when the workers their changed from mainly male to mainly female. An employer that promises job security may have to offer little else to get droves of employees into jobs but underemployed or not using their greatest talents. A business may cut its research and development support, robbing from its future prospects to survive yet another day in the present. The result in the electronics and computer industry is likely to be a pattern of technology advance like that of the 1920's and 1930's when great things on the drawing board were promised (like tv) but were painfully slow in getting from the trade shows to the mass market. All the development work in such a climate is done by the flaky and underfinanced while those capable of implementing such new developments, the big and wealthy firms hold back. Today, high definition tv, small dish satellite tv and ordinary radio programming broadcast by satellite are working technologies put on hold now. No really new computer hardware is likely to get the mass support to change the standard to the point that MS DOS dominates it today for the same reason (plus lack of upgrade money of users), so new hardware or operating systems are likely to find small rather than wide application. New features via new add ons (like networking hardware, monitor/graphics hardware with graphics etc. processors). So software instead of more expensive hardware, will turn the MS DOS, etc. market into a jungle of incompatibility and upgrade opportunities, familiar to any hobbyist who has owned an older home computer as it went through this phase of software and hardware upgrade. The market becomes a mess.

Local Corel software, although wildly successful, laid off 20% of their workers because it was too tempting not to trade up to better qualified, educated ones, from the swelling jobless pool. Will that make it harder for new, flaky companies to get cheap, reliable, dedicated workers who previously would have taken a less competitive job offer in the hope pf making a career in spite of lesser education It does chill workers everywhere in the present wondering if their boss would like to trade them too. I see Santa crossing a new computer off lists as one result.

Our Students, Phobias And Undermathing -- Awaiting The Next Flim Flam

It is a shocking sight when we see the mess we have made of the art of teaching math to indifferent students. There seems to be three gen rations of high school math students in Canada, and the pattern is probably true in many non-third world countries with only small variations. The older generation took Latin as an extra language, learned geometry from text books that were slightly revised versions of Euclid' "Elements", the drawings taken from ancient sketches in the sand by that 300 B.C. era master himself. They learned algebra up to quadratic equations and the binomial theorem. Most, if interested in physical sciences especially took analyitic geometry and a heap of (plane) trigonometry, but not calculus or vectors. Of course, we are talking about academic stream students bound for university or teacher's college or who wanted good, basic math before starting the long climb up the the successive levels of seniority in offices of businesses or government.

Ontario's thirtyish generation is a big mix. After about 1968, high schools abandoned their grip on conventional standards of discipline and in the resulting scramble for survival, many teachers fudged the actual performance level of their passing students, by using such a mixture of marking techniques that marks meant nil. Our college needing math abilites in its electronics and other technician students, found it so misleading to compare a 75% from one school, sending a math illiterate, with a 60% from another school, being quite competent and knowledgeable that for a while some stopped choosing students to admit for the limited number of places in classes by marks and started using lottery-like methods! This generation was also the one for which the term math phobia was invented. It was also the one in which early experiments in new math, had given away to a rigid forcing of new math on every academic student. The third group, in their early twenties now, saw the 'new math' replaced by better methods and Latin and most other extra languages go too.

But while the importance of teaching more math, including calculus in high school is recognized in the program, the 'free' space left by Latin has been filled if at all, by soft-options rather than the same number of hours of math. The top students know more math than the other groups, but are also (in Ontario) older and have trouble understanding the mass of detail they are thrown. They do seem to be better prepared than the middle group, although 1970's math varied widely indeed.

Certainly public opinion recognizes that today's high school graduate needs lots of 'hard' math knowledge and a definite taste for it, even among the next rung of academic ability well below those who normally finish university or technologist courses. Most would recognize that the modest gains of the recently reformed program, are a little below the standard desirable for the university bound and much below that needed by those for whom the courses will be the last math to be taken before leaving school to work, where many may then actually have to know enough analytic geometry to reprogram a computer controlled machine on the shop floor, or know more about statistics than how to add or subtract raw scores. Indeed, the worry over the quality of math of these students should be acted on decisively, and those industrialized countries that will need higher math skills among ordinary workers because of modern manufacturing also are most likely to, like America, have the greatest number of poorly educated and motivated immigrants to employ that way.

Right now, the public knows the educators are self-satisfied, and so the scene shifts to many 'experts' and prepackaged solutions offered for public support, in what is rapidly becoming a circus of quack cures. Perhaps the saying that there is no royal road to learning, said to a priveleged student wanting the easy way in education, just as his royal treatment had made everything else in his life easy, now should be updated. Today we should say, "There is no single or pre-packagable way to better education." It is more like winning a war, in that there are too many possible problems to anticipate all of the important ones. So good education is still more like infantry combat than computerized missile zapping by video. It is overcoming every obstacle, small, large and medium-size, blocking the student from understanding and being motivated to try hard, at every mind-wandering moment of class time. At every point where the asigned text is stupid or boring, the teacher must put in a pontoon bridge of ingenious construction to bring the students safely accross and every time one falters or baulks, must employ a sergeant's keen eye and instant authority, to get the student back into the line leading to math mastery in school.

This does not mean that every new system or method or new approach is useless. In fact now is the time to celebrate two successes in better educating a larger proportion of students than just the high achieving and technically bound, and see them as examples. I am not talking about new math, flawed perhaps by the fact that mathematicians are at a problematical point in their confidence to explain their work without recourse to a formal language that makes sense to no beginner. What Should be nominated are two innovations from Dartmouth Univ. the Finite Math texts of the 1950's and BASIC computer language. We still need like innovations!

AVPC 2-92.

Chaos And Computers — Chaos Describes More Than That Mess On Your Desk

What castles the mathematicians build in the air! Clear, clean line drawings of castles. Flat glissening smooth walls, perfect conical roofs on the towers. Unfortunately, that ain't real life, where the walls are pock marked, not mirror-smooth, the tower roofs rough shingled with hand-cut shakes and the lines broken with the shakes of an artist's hand, in spite of the attempt to hold it straight, to an unbroken, unwavering, idealized reality.

There are many problems in engineering like this. The cases where the real, "practical" spring does not fully return to its shape after being stretched, the stock market cycles that never repeat with perfect enough regularity to let anyone who can plot a simple curve with ruler and compass make a killing. The noise on the phone lines that turns your computer BBS download into a garbage collection of miscellaneous symbols from different languages and playing cards, and ... not at all the text on the latest tricks and tips that you expected. Attempts to chart the stock market or predict the occurence of interference on the phone lines, first were based on the assumption that the real world was like straight lines and regular curves, beneath all the minor, bumpy imperfections that we all see when we look at the world. The underlying reality was the smooth perfection and straight lines that form the three dimensions, the one-dimensional line, the two-dimensional plane with X and Y axes, and the three dimensions of solid objects, that have a volume and therefore a weight. Or so thought the mathematicians.

But math grows too. Mandelbrot, a mathematician from France, ensconced in a job at IBM in the USA, studied the noise problem that plagues data transmission for IBM, and found that maybe the theory of underlying regularity, superficial imperfections in real life, superimposed on them, would not help in designing error proof systems. If that were the case, simply stepping up the power, current and voltage, of the underlying regular transmission, and you would overcome the effect of the little imperfections that represented the noise. Unfortunately every time the signal power was stepped up, some amount of the noise was often sufficient to block the correct signal and substitute an error for it. Mandelbrot decided that the mathematical theory to explain this was that the reality of noise was not of a minor imperfection superimposed on an underlying perfect reality but the noise was of equal reality (and strength potential) to the signal. Suggestion to IBM: just check for the errors and correct them when detected (by retransmission for example) rather than trying to drown them out. Suggestion for mathematicians: maybe the imperfections in the real world compared to the smoothness of the ideal world of conventional geometry, where curves never start and stop but go through all the points separating their beginning from their end, maybe that mathematics does not describe all phenomena in the world, should not limit the idea of legitimate math compared to curious anomalies and mathematical paradoxes. Suggestion for geometers is that maybe this geometry of our imperfect world, the rough surface reality is not best described always in a geometry of dimensions like 1, 2 and 3, that is dimensions whole numbers. You can use $\frac{1}{2}$, $\frac{1}{4}$ or 0.2187 as dimensions too, a fractional dimension world, where $1\frac{1}{4}$ diminsions is a legitimate reality, and from this, came the word fractal. But this is just one fascinating story from the book, Chaos, Making A New Science, Penguin paperback, 1987, by J. Gleick, that has become a classic in the literature explaining science to the citizen scientist, that is all of us. The treatment is based on personal stories of the discoverers of this new mathematics, and the informal, friendly way in which they talk to the reader rather than over his (or her) head is rare in popularizations as is the breadth and detail in which the story is told.

The TAB, book of 1989 on Chaos, by E. Rietman, Exploring the Geometry of Nature is probably a good follow-up for the reader of the first book that wishes to look into some of the actual mathematical equations involved or try the GWBASIC routines while the illustrations in Gleick are mainly pictures rather than equations. Yet another introduction to the field is an article in Scientific American magazine, which does have some spectacular pictures and the usual level of text to accompany them which the reader has come to expect of this semi-technical popular magazine. (Nov.81 and). These sources do not exhaust the popularizations coming to a bookstore near you (or a library), since books on this important and fascinating result of the ability of computers to calculate and plot the massive numbers of points involved in studying this field, are being issued just as researchers are discovering new applications and rules for this science. Just when we thought that all the important math had been invented long ago, here comes chaos!

Yourdon's Controversy - Continued From Page 2 . . .

this page copyright © Dec. 92 by BILL J. HARMER, Ottawa

In the past, cold war government spending provided a stable supply of techno-workers and the educational and ancillary support they need to be of a certain critical size, as well as pure research or advanced research at least. So Steve Wozniak took an interest in computers because his dad worked at Lockheed, at its local 'military' plant, and had the manuals for early computer circuits lying around when Steve was growing up. Later Steve found a job as a computer operator in one of these ancillary operations, so to speak, and really got bitten by computers, so that the longing for one of his own, led him to design the first Apple computer. Without some sort of government, or big business base of sufficient size and stability, perhaps he would have taken up Zen haiku poetry instead as a lifelong interest and worked in a car repair shop or something. So if such a stable, big bucks and big organizational base is part of the US secret of high tech success in the past, government spending or industrial spending supported by local cash-cow manufacturing seems to be the American key to high tech industrial competition. That does point to the importance of big business and government in the equation, but there is more. Where the gigantic (often state-owned firms like CSF/Thomson), furnish a needed part of the equation, individualistic, risk taking, start-up enterprises, most of which neve make much money if any, are needed to try new technologies, which will get even more important as the action moves to software and the need for new ideas in that field.

In the end, the outcome depends on whether anyone takes action on such analyses. Count the evidence given in computer expert, E.Yourdon's book, of this year (1992), "The Decline & Fall of the American Programmer"(Prentice-Hall) as predicting failure.

MS DOS Shareware News: Canada has its shareware mailorder firms too: Shareware To Go, P.O.B. 37038,Willowdale,Ont.M2M 4J8 (416)496-1771 voice.....A former Sinclair N/L, The Hacker,may restart as an MS DOS/shareware n/l-c/o,2345 Moorpark,Henderson,NV,USA

AI In The News Today-Prof.Haykin at Hamilton,Ont. has applied neural network software normally used for human vision emulation to radar detection of icebergs ....

Databases For The 1990's — Time For A Different Approach!

Data processing in the 1960's happened in an isolated room that produced printouts every month or so. In the 1970's terminals put instant access to data and input on many desks spread throughout the office but the system was still an integrated package, centrally controlled and not containing any more or any less info than was in the central computer's storage. Microcomputer databases of the present mimic those terminal-type databases today, although networking and multi-tasking is starting to change their structure internally. To write a database for today, three improvements would likely be obligatory (compared to say the mainframe inspired dBASE IV of Borland). One thing simple to implement in CP/M or MS DOS without a GUI overlaid, would be a simple way of grabbing info off the screen, put there by another program access, so that instead of the database containing all that was entered in it and nothing else, any other file or database could be consulted, data displayed on the screen, and that data grabbed off the screen and put into the database of this improved type. So instead of representing a closed system of data, it would resemble a utility to look things up anywhere they are encoded electronically, from a thesaurus or spelling checker, on-line database on the other coast, or simply from another, incompatible-data format program. Secondly, a new style database would be able to store procedure command/lists with the data, so that John Smith's file would also contain a batch/submit-like file for finding among several datafiles, enough info to make a special item like an advertising poster or report title page that might be frequently used Thirdly, although not easy to implement on a small computer, a new style database would need to be smarter itself, to tell when you likely made a silly mistake or need help of a certain level of sophistication compared to another possible level, like that suitable only for a rank beginner. Question: Which amateur will write the first shareware program to add features like this in MS DOS or CP/M even to their public domain or shareware database? Get coding!

Apple Macintosh News Flash -Problems of a hardware nature (overheating) with a small defect in one model of the Powerbook portable have surfaced....local individual offers Canadian Lotto 649 program for Mac, for $10, stocking stuffer (613)596-0962

Books: Paradigm Shift by Tapscott & Caston, two DMR (computer) technology planners explore the themes of global competition and shifts in techno-trends in the 1990's.... Hard Disk Management With DOS by Gookin,1990, Windcrest or some similar book : is an essential item for the desk drawer of most office workers using hard disks & MS DOS

Buyer Beware - New Problems With Magnetic Storage Etc. And The Hobby

It seems like the end of the DSDD disk drive, and not 2.6 meg, but the high density 1.2 Megabyte 5¼ inch and more expensive 1.44 Megabyte 3½ inch disks, seem the highest capacity for this recession. We do not like the use of drives that offer less than the current technological limit (5 meg?) due to stagnation in the market Too, some newer, cheaper 80386/80486 computers are using as their one floppy, a flimsy drive that in the hands of the average hobbyist, not a big hard disk or network reliant data user typically, can wear out within 6 months, as complaints or consumers are starting to show up (laptops also use floppies more than some manufacturers anticipated). So one has to be careful in buying a PC for home use.

Even hobbyists using the older computers will be affected when they find that new DSDD drives are no longer on the market, the high density ones flimsy and incompatible with all the old disks saved in DSDD format, unless special software drivers can be installed (and found) for their classic computers.

One further hazard is turning up in that the new computers using faster baud rates on modems and software that allows better checking of bad areas on disks and bad blocks in BBS telephone line transmission, can also compensate for these errors. That may leave the amateur using an older computer without this fancier error correction, not able to use cheap floppy disks that will work okay on the computers in the shop which have (say MS DOS 2 or later). So this testing OK at the shop does not mean that your computer is not working or the disks are good! Similarly for modems and telephone line problems that only classic computer software will be bothered by to the point of failing to work.

If all that were not enough of a complication for the life of the hobbyist, the selling of low quality floppy disks (and "VHS" cassettes for VCRs even) with rough and poor quality coatings that damages floppy drives has started. Buyer beware!

---- and now the good news for the hobby. . .

A Return Of Low Cost Hobby Computers - Astounding Scoop For Us Here! $ $ $

Times get tough. People lose their jobs. The hobby of home computing is struck the final death blow as a result...? This of course is not necessarily the way things will go. In fact there are some signs of the opposite, a resurgence in sales of cheaper and hobby computers. More people who become unemployed than not, will not end up on the street and they may need a new home computer at some time. for wordprocessing, home business etc. They may not buy the retailers' favourites now, the 80386/80486 model. For resume preparation, home business or writing one's memoirs any old computer may do. Rather than the purchase of a $1500 IBM compatible previously the choice because of the need and opportunity to use at home, IBM-type software from the work place, these workplace-detached will be looking for a $500 computer, and public domain and bundled software. Here comes the Commodore Amiga 600 at about $500, and with some ingenuity, home computing goes on.

And even the less-than-$200 computer market? Surely that passed with the end of the black wedge-shaped TS1000 of Timex and its 1982 boomtime. But no, the very low cost computers are back, membrane keyboards like the TS1000, and all. But you will not see them in any store, unless you visit the toy department. There they are, called pre-computers, children's computers, many names, but they are a version of the under $200 or even under $100 computer, back already. It takes no prediction in this case. Just go to a Kmart toy department and see for yourself!

Will the low cost computer market come back and a niche market of a basically educational, perhaps school user group based (and mailorder) sort as before? . . .

....

Local News: Ottawa, US Govt. info. BBS number (Canada only) (613)563-0219 ....The book of computer programming inspiration, a collection of Scientific American "Computer Recreations" articles by Canadian, K.Dewdney, (U.Western Ont.), still fascinates the amateur programmer. Core War the virus game first aired in the columns though said to originate from Montreal. (Sci.Am., Core Wars, May, 1984 issue)
....Information networking is being used to explain everything from economic failure of traditional models of growth, the functioning of the human intelligence and why you get two of everything from certain mailing lists, the latter topic tackled in the book Paradigm Shift by Tapscott & Caston, at least by implication, which deals with the problem of information in islands that must be joined together with new approaches by business organizations today. Is there money in fixing this data scatter problem by software? You bet! ..... Gandalf launches handunit radio modem at Comdex, 1992. Instead of Dick Tracy's wrist tv., this shows a terminal can be the size of a walkie-talkie with LCD. Someone in the field need an answer? Just send it to the wireless modem....